

What is claimed is:

1. A manufacturing apparatus for a semiconductor device wherein a plurality of semiconductor manufacturing and processing apparatuses are installed in a clean room, comprising:

5 an external air cleaning device connected to a supply port of said clean room for supplying a cleaned-up outside air into said clean room;

an air duct comprising a common air duct section for constructing common air pass to said plurality of semiconductor manufacturing and processing apparatuses in said clean room and an individual air duct section branched off from said common air duct section for constructing individual air pass to each of said plurality of semiconductor manufacturing and processing apparatuses;

15 pre-stage air cleaning and ventilating means having a chemical filter and a fan for further cleaning a part of said cleaned-up outside air supplied by said external air cleaning device at an entrance of said common air duct section; and

20 post-stage air cleaning and ventilating means having a fan filter unit at each of said individual air duct section for supplying a further cleaned-up outside air by said supplying said post-stage air cleaning and ventilating means to each of said plurality of semiconductor manufacturing and processing apparatuses.

2. The manufacturing apparatus as cited in Claim 1, wherein said post-stage air cleaning and ventilating means includes a minute difference pressure damper.

3. A manufacturing method for a semiconductor device wherein a plurality of semiconductor manufacturing and processing apparatuses are installed in a clean room, comprising:

30 an external air cleaning device connected to a supply port of said clean room for supplying a cleaned-up outside air into said clean room;

an air duct comprising a common air duct section for

constructing common air pass to said plurality of semiconductor manufacturing and processing apparatuses in said clean room and an individual air duct section branched off from said common air duct section for constructing individual air pass to each of said plurality of semiconductor manufacturing and processing apparatuses;

pre-stage air cleaning and ventilating means having a chemical filter and fan for further cleaning a part of said cleaned-up outside air supplied by said external air cleaning device at an entrance of said common air duct section; and

post-stage air cleaning and ventilating means having a fan filter unit at each of said individual air duct section for supplying a further cleaned-up outside air by said supplying said post-stage air cleaning and ventilating means to each of said plurality of semiconductor manufacturing and processing apparatuses.

4. The manufacturing method as cited in Claim 3, wherein said second air cleaning and ventilating means includes a minute difference pressure damper.

5. A manufacturing apparatus for a semiconductor device comprising:

a clean room for installing a plurality of semiconductor manufacturing and processing apparatuses;

an external air cleaning device connected to a supply port of said clean room for supplying a cleaned-up outside air into said clean room;

a common air duct section installed in said clean room;

a first air cleaning and ventilating means connected to said common air duct section for cleaning and ventilating a part of said cleaned-up outside air from said external air cleaning device to said common air duct section;

individual air duct section branched off from said common air duct section and connected to each of said semiconductor

manufacturing and processing apparatuses; and

5 a second air cleaning and ventilating means interposed between said individual air duct section and each of said semiconductor manufacturing and processing apparatuses for cleaning and ventilating the air to be supplied to each of said semiconductor manufacturing and processing apparatuses.

6. The manufacturing apparatus as cited in Claim 5, wherein
10 said external air cleaning device includes a fine grain eliminating filter for cleaning up and supplying the outside air into said clean room.

7. The manufacturing apparatus as cited in Claim 6, wherein
15 said first air cleaning and ventilating means includes;
a chemical filter means and ventilation means for further cleaning up said part of said cleaned-up outside air from said external air cleaning device and ventilating to said common air duct section.

8. The manufacturing apparatus as cited in Claim 7, wherein
20 said second air cleaning and ventilating means includes a fan filter unit for further cleaning up the air from said individual air duct means and ventilating to each of said semiconductor manufacturing and processing apparatuses.

25 9. The manufacturing apparatus as cited in Claim 8, wherein said second air cleaning and ventilating means includes a minute difference pressure damper.

10. A manufacturing method for a semiconductor device wherein a
30 plurality of semiconductor manufacturing and processing apparatuses are installed in a clean room, comprising the steps of:
supplying a cleaned-up outside air by an external air cleaner

into said clean room;

supplying a part of said cleaned-up outside air to a common air duct means through a pre-stage air cleaning and ventilating means having a chemical filter;

5 supplying a branched off air from said common air duct means to each of said plurality of semiconductor manufacturing and processing apparatuses through a fan filter unit by way of an individual air duct section.

10 11. The manufacturing method as cited in Claim 10, wherein said second air cleaning and ventilating means includes a minute difference pressure damper.